Amendments to the Claims

Please cancel Claims 16, 18-23, and 40. Please add Claims 46-62. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1-45. (Cancelled)

46. (New) A queuing method comprising the steps of:

writing in a first memory, having a first memory access time, a plurality of pointers; and

establishing a linked list by transferring the plurality of pointers to a second memory having a second memory access time.

47. (New) A queuing method as claimed in Claim 46 wherein the first memory access time is less than the second memory access time.

48. (New) A queuing method as claimed in Claim 46 wherein the step of transferring forwards the plurality of pointers to the second memory in a single transfer cycle.

49. (New) A queuing method as claimed in Claim 46 wherein the step of writing writes each pointer in a single write operation to the first memory.

50. (New) A queuing method as claimed in Claim 46 further comprising the step of: dequeuing each pointer from the second memory.

51. (New) A queuing method as claimed in Claim 46 wherein the step of transferring forwards a full cache row into the second memory.

52. (New) A queuing method as claimed in Claim 46 wherein the step of transferring forwards a partially filled cache row into the second memory.

53. (New) A queuing method as claimed in Claim 51 wherein the cache row is transferred in a single write cycle.

54. (New) A queuing method as claimed in Claim 52 wherein the cache row is transferred in single write cycle.

55. (New) A queuing method as claimed in Claim 46 wherein entries in a cache row in first memory are ordered by position in the cache row.

56. (New) A queuing method as claimed in Claim 46 wherein the first memory includes two cache rows.

57. (New) A queuing method as claimed in Claim 46 wherein a packet vector stored in the second memory includes a cache row and a count of the number of pointers stored in the cache row.

58. (New) A queuing method as claimed in Claim 46 wherein a packet vector stored in the second memory includes a link to a next packet vector.

59. (New) A queuing method as claimed in Claim 57 wherein a packet vector stored in the second memory includes a link to a next packet vector.

60. (New) A queuing method as claimed in Claim 46 wherein the plurality of pointers are packet pointers.

61. (New) A queuing method as claimed in Claim 46 wherein at least one of the plurality of pointers is written into an egress port queue.

62. (New) A queuing method as claimed in Claim 46 wherein each pointer is determined from a packet header of a data packet.